



Biomedical Engineering

Project Management

Course Code: UNR431

Level: 400

Allowed Time: 2 hours

01/01/2020

First 2019 /2020

Final Exam [50 Marks]



Faculty Of Engineering

NINE questions are in TWO pages.

Don't use pencil.

Answer ALL the questions:

Q.1) [5 Marks]

Assuming that you want to rent an electricity generator for your project with a LE200 per day, and you can buy this equipment by the investment cost of LE2800, plus LE60 operating daily cost. What is period of time needed to equal the cost of the lease and the cost of the purchase?

If you need the item for 21 days, should you rent or buy it?

Q.2) [5 Marks]

Explain the role of TQM approaches of KAIZEN, 6 Sigma, & Balanced Score Cards in Health Care Projects.

Q.3) [5 Marks]

Why should the Project Manager, keep himself from getting "down in the weeds", especially on large projects?

Q.4) [5 Marks]

Draw an example of project risks assessment matrix, and identify the worst risk from its impact and probability perspectives.

Q.5) [5 Marks]

What are the important project human resource manager competencies?

Q.6) [5 Marks]

List three suggestions for improving project communications and how did the Japanese manager solve the project meetings problems?

Q.7) [5 Marks]

You are the project manager for a medical waste burning project. Local residents and environmental groups are opposed to this project. Management agrees to move this project to a different location. This is an example of which one of the following risk responses?

- Passive acceptance
- Active acceptance
- Mitigation
- Avoidance



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Q.8) Draw the Program Evaluation and Review Technique (PERT) according to the project data below: [5 Marks]

Position	Slack	Finish		Start		Depends on:	Duration (Day)	Description	Activity
		LF	EF	LS	ES				
critical	0	3	3	0	0	---	3	Determine objectives and plan the project	A
	5	13	8	8	3	A	5	Target customers and marketing tool	B
critical	0	13	13	3	3	A	10	Select the team	C
	2	19	17	15	13	C	4	Discuss the alternative ideas of design	D
critical	0	33	33	20	20	D,G,H	13	Choose the appropriate/optimum idea	E
critical	0	36	36	33	33	E	4	Execute the project	F
	2	20	18	15	13	C	3	Monitor and control the project	G
critical	0	21	21	12	12	B,C	7	Package, and deliver (close the project)	H

Q.9) [10 Marks]

Determine the critical path of the Project: Development of new catheter, using the data of the table below, assuming that all tasks will start as soon as possible.

Activity	Description	Dependency	Duration (Day)
A	Initiate the project and determine objectives	-	3
B	Target customers and marketing tool	-	3
C	Select the team	B	7
D	Discuss the alternative ideas of design	A	4
E	Choose the appropriate/optimum idea	B	6
F	Design the full identity of the project	C	9
G	Select the suitable portal of the project	E	3
H	Collect information, and materials	E	25
I	Execute the project	D	35
J	Monitor and control the project	I	26
K	Test the project outcomes	H	17
L	Prepare the appropriate prototype	G,F	7
M	Package, and deliver (close the project)	L,K,J	6

All Best Wishes, Dr. Nabil Shalaby